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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/627,248	07/28/2000	Donnie V. Savage	CISCP541	2370
26541	7590	06/02/2005	EXAMINER	
RITTER, LANG & KAPLAN P.O. BOX 2448 SARATOGA, CA 95070			KADING, JOSHUA A	
			ART UNIT	PAPER NUMBER
			2661	

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/627,248

Applicant(s)

SAVAGE, DONNIE V.

Examiner

Joshua Kading

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 and 26-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 and 26-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 4, 6-13, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,631,136 B1, Chowdhury et al. (Chowdhury) in view of U.S. Patent 5,581,543, Natarajan.

Regarding claims 1, 19, and 21, Chowdhury discloses a method and computer program to implement said method (*col. 3, lines 26-29*) and further comprising "memory (*col. 2, lines 17-19*); and a processor (*col. 2, lines 17-19 whereby processing is done with a processor*) configured for receiving an information packet received from a neighbor source, the information packet identifying the source as a stub router and specifying route types that the source will advertise (*col. 8, lines 28-42 where the HELLO message is sent from all routers, including the stub router node 502 as seen in figure 5, and identifies the router type (i.e. stub router) and advertised routes*)."

However, Chowdhury lacks what Natarajan discloses, the processor "sending query packets requesting route information only to neighboring devices that have not been identified as stub routers upon receiving notice of a failed connection (*col. 9, lines 65-col. 10, lines 1-18 where the process of evaluating the different switching nodes*

requires messages (queries) to be sent back and forth between nodes to derive the necessary information, this is inherent otherwise how else would this information be ascertained, further this is only done with the switching nodes, which as seen in figure 1 are the only nodes contained in element 30, gateway 22 (the stub router) is not part of this process as described)."

It would have been obvious to one with ordinary skill in the art at the time of invention to include the querying nodes after notice of a failure for the purpose of regenerating alternate routes in the network. The motivation for regenerating routes in a network because of a failure is to avoid the failure and thus keep communication flowing.

Regarding claims 14, 22, 23, and 24, Chowdhury discloses a method and computer program for implementing said method (*col. 3, lines 26-29*) and further comprising "a processor (*col. 2, lines 17-19 whereby processing is done with a processor*) configured for receiving at a router identifying the router as a stub router, sending an information packet from the stub router to neighboring devices, the information packet identifying the source as a stub router and specifying route types that the stub router will advertise (*col. 8, lines 28-42 where the HELLO message is sent from all routers, including the stub router node 502 as seen in figure 5, and identifies the router type (i.e. stub router) and advertised routes*).

However, Chowdhury lacks what Natarajan discloses, the processor "sending a response packet with routes identified as inaccessible upon receiving a query for route

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information other than the type specified in the information packet (*col. 9, lines 65-col. 10, lines 1-18 where the process of evaluating the different switching nodes requires messages (queries) to be sent back and forth between nodes to derive the necessary information, this is inherent otherwise how else would this information be ascertained, further this is only done with the switching nodes, which as seen in figure 1 are the only nodes contained in element 30, gateway 22 (the stub router) is not part of this process as described*)."

It would have been obvious to one with ordinary skill in the art at the time of invention to include the querying nodes after notice of a failure for the purpose of regenerating alternate routes in the network. The motivation for regenerating routes in a network because of a failure is to avoid the failure and thus keep communication flowing.

Regarding claim 20, Chowdhury and Natarajan disclose the computer program of claim 19. However, Chowdhury lacks what Natarajan further discloses, "the computer readable medium is selected from the group consisting of...system memory (*col. 3, lines 11-14*)..." It would have been obvious to one with ordinary skill in the art to include the system memory for storing the program for the same reasons and motivation as in claim 19.

Regarding claims 2, 17, and 36, Natarajan lacks what Chowdhury further discloses, "wherein means for sending an information packet comprises transmitting a

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hello packet (*col. 8, lines 28-42*). It would have been obvious to one of ordinary skill in the art at the time of invention to include the hello packet for the same reasons and motivation as in claims 1, 14, and 22.

Regarding claims 4, 15, and 23, Chowdhury lacks what Natarajan further discloses "the network has a hub and spoke arrangement and the device is a hub and the stub router (*figure 1, where, for example, element 37 is the device which represents a hub with spokes 34, 38, and the gateway (stub router)*)." It would have been obvious to one with ordinary skill in the art to include the hub and spoke arrangement for the same reasons and motivation as in claims 1, 14, and 22.

Regarding claims 6, 7, 8, and 34, Chowdhury and Natarajan disclose the method of claim 1. However, Chowdhury and Natarajan do not explicitly disclose the advertised routes are "connected routes (claims 6 and 34)", "summary routes (claim 7)", or "static routes (claim 8)". Although the route types advertised are not explicitly disclosed, it would have been obvious to one with ordinary skill in the art at the time of invention to have any three routes (connected, summary, or static) advertised as a matter of design choice. The choice of routes the source will advertise is completely dependent upon the designer of the system. The motivation for choosing the type of route is a preference of the designer and one route type obviously holds no distinct advantage over the others, as applicant has included all three in the dependent claims.

Regarding claim 9, Chowdhury lacks what Natarajan discloses, "wherein the device and the neighboring devices have point-to-point links (*figure 1, the elements in element 30*).” It would have been obvious to one with ordinary skill in the art to include the point-to-point links for the same reasons and motivation as in claim 1.

Regarding claim 10, Natarajan lacks what Chowdhury further discloses, "wherein the device and the neighboring devices have multipoint links (*figure 5, shows each node having a plurality of ports, i.e. multipoint links*).” It would have been obvious to one of ordinary skill in the art at the time of invention to include the multipoint links for the same reasons and motivation as in claim 1.

Regarding claim 11, Chowdhury lacks what Natarajan discloses, "wherein only one neighboring device is a stub router (*figure 1, device 37 has only one neighbor that is a stub router, i.e. gateway 22*).” It would have been obvious to one with ordinary skill in the art to include the only one stub router neighboring the device for the same reasons and motivation as in claim 1.

Regarding claim 12, Chowdhury and Natarajan do not explicitly disclose "wherein multiple neighboring devices are stub routers.” Although neither Chowdhury nor Natarajan disclose the multiple neighbors as stub routers, Natarajan does suggest that element 28 can also act as a gateway (*col. 2, lines 51-52*). This means, for example, if figure 1, element 30 had only one switching node, then the device (the switching node)

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would have multiple stub routers connected to it by way of element 28 and element 22. It would have been obvious to one with ordinary skill in the art to see that this scenario is possible and that there would therefore be multiple stub routers connected to the devices of the network. The motivation for having multiple stub routers is again a designer preference and a function of the network.

Regarding claim 13, Chowdhury lacks what Natarajan discloses, "wherein the device is a router (*figure 1, any element node in figure 30 acts as a routing device as suggested by the multiple paths of each node, thus implying that the node must route the data out the appropriate path*)."

It would have been obvious to one with ordinary skill in the art to have the device consist of a router for the same reasons and motivation as in claim 1.

Regarding claims 26, 27, 28, 29, and 30, Chowdhury discloses "a computer-implemented method for route redistribution within a network, the method comprising: receiving information at a router identifying the router as a stub router (*col. 8, lines 28-42 where the HELLO message is sent from all routers, including the stub router node 502 as seen in figure 5*)."

However, Chowdhury lacks what Natarajan discloses, "limiting an amount of route information sent by the stub router to a neighboring device in response to a query for route information (*figure 9, element 116 whereby creating a shortest path definition*

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that does not include the failed link, Natarajan has limited an amount of route information sent by the stub router to neighboring devices)."

It would have been obvious to one with ordinary skill in the art at the time of invention to include the computer code and querying of nodes after notice of a failure for the purpose of regenerating routes of the network. The motivation for regenerating routes in a network because of a failure is to avoid the failure and thus keep communication flowing.

It is further noted that Chowdhury and Natarajan also do not explicitly disclose "...wherein the limiting the route information sent by the stub router comprises limiting the route information to..." "only connected routes (claim 26)", "only summary routes (claim 27)", "only static routes (claim 28)", "only internal routes (claim 29)", or "only external routes (claim 30)".

Although the route types advertised are not explicitly disclosed, it would have been obvious to one with ordinary skill in the art at the time of invention to have any of the five routes (connected, summary, static, internal, or external) advertised as a matter of design choice. The choice of routes the source will advertise is completely dependent upon the designer of the system. The motivation for choosing the type of route is a preference of the designer and one route type obviously holds no distinct advantage over the others, as applicant has included all three in the dependent claims.

3. Claims 3, 18, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chowdhury and Natarajan as applied to claims 1, 14, and 22 above, and further in view of applicant's admitted prior art (AAPA).

Regarding claims 3, 18, and 31, Chowdhury and Natarajan lack what AAPA discloses, "wherein the device and stub router are configured for EIGRP (*specification, page 2, lines 9-20 where it is strongly suggested that gateways (stub routers) as well as other devices (namely routers) can be configured for EIGRP*)."

It would have been obvious to one with ordinary skill in the art at the time of invention to have the stub router and device configured for EIGRP for the purpose of providing a way to update routes of a network with information from only neighboring nodes required. The motivation for updating routes of a network with neighboring node information only is to save resources by not updating the entire network.

4. Claims 5, 16, 33, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chowdhury and Natarajan as applied to claims 1, 14, and 22 above, and further in view of U.S. Patent 5,864,666, Shrader.

Regarding claims 5, 16, 33, and 35, Chowdhury and Natarajan lack what Shrader discloses, "where the network includes a dual homed host (*figure 2, element 100 as described in col. 4, lines 30-37*)."

It would have been obvious to one with ordinary skill in the art at the time of invention to include the dual home host configuration as in Shrader for the purpose of providing a way to connect two networks (or other devices such as any router for that matter) and provide a firewall. The motivation for providing a firewall

between two networks or devices is so that there is relative security between the networks or devices.

Response to Arguments

5. Applicant's arguments, see REMARKS, section II, page 9, filed 28 February 2005, with respect to the objections to claims 26-30 have been fully considered and are persuasive. The objections of claims 26-30 have been withdrawn.

6. Applicant's arguments, see REMARKS, section III, third paragraph, page 10, lines 4-6 and 11-13, filed 28 February 2005, with respect to the rejections of claims 1, 2, 4, 6-13, and 19-21 under 35 U.S.C. 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of a newly found prior art read in light of applicant's remarks concerning the claimed invention.

7. Applicant's arguments filed 28 February 2005 have been fully considered but they are not persuasive.

Applicant argues that Natarajan does not read on the claimed invention because Natarajan does not disclose "sending query packets requesting route information only to neighboring devices that have not been identified as stub routers. Query information is sent to all nodes (including all neighboring devices) to determine if there is a failed link." The examiner respectfully disagrees.


Noted in the rejection above, Natarajan fully discloses sending query packets to nodes in the switching system. This does not include stub routers as the query packets are only sent to switching nodes and not to the gateway of Natarajan (*col. 3, lines 9-11 where the switching nodes are clearly not the same as a gateway, they are separate entities*), which acts as the functional equivalent of a stub router as inferred from applicant's specification, specifically from applicant's figure 2 where nodes 6-505 act as stub routers, i.e. they are at the edge of the network, similar to the gateway of Natarajan.

8. Applicant's arguments, see RMARKS, section III, page 12, last paragraph, lines 5-7, filed 28 February 2005, with respect to the rejections of claims 14, 15, 17, 22-24, 26-30, 32, 34, and 36 under 35 U.S.C. 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of a newly found prior art read in light of applicant's remarks concerning the claimed invention.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Kading whose telephone number is (571) 272-3070. The examiner can normally be reached on M-F: 8:30AM-5PM.

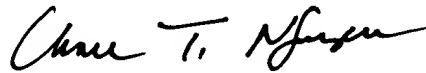
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Joshua Kading
Examiner
Art Unit 2661

May 25, 2005



CHAU NGUYEN
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TECHNOLOGY CENTER 2600